

CLAIMS

What is claimed is:

1. A method for creating a voice response grammar in a voice response server,
the method comprising:
 - 5 identifying a user for a presentation, the user having a user grammar, the user grammar including one or more user grammar elements, each user grammar element including an identifier of a structural element, a key phrase for invoking a presentation action, and a presentation action identifier representing a presentation action; and
 - 10 storing a multiplicity of user grammar elements for the user in a voice response grammar on a voice response server.
2. The method of claim 1 wherein identifying a user for a presentation comprises:
 - creating a data structure representing a presentation; and
 - 5 listing in the data structure at least one user identification.
3. The method of claim 1 wherein the user grammar comprises a multiplicity of user grammar elements for a content type, the method further comprising:
 - identifying presentation documents for the presentation, each presentation document having a content type; and
 - 5 selecting user grammar elements according to the content type of the identified presentation documents;

- 10 wherein storing a multiplicity of user grammar elements for the user in a voice response grammar on a voice response server includes storing the selected user grammar elements in the voice response grammar.
4. The method of claim 1 wherein the user grammar comprises a multiplicity of user grammar elements, the method further comprising:
- 5 identifying presentation documents for the presentation, the presentation documents including structured documents having structural element identifiers; and
- selecting user grammar elements in dependence upon the structural element identifiers;
- 10 wherein storing a multiplicity of user grammar elements for the user in a voice response grammar on a voice response server includes storing the selected user grammar elements in the voice response grammar.
5. The method of claim 1 wherein the user grammar comprises a multiplicity of user grammar elements, the method further comprising:
- 5 identifying presentation documents for the presentation, each presentation document having a presentation grammar including presentation action identifiers; and
- selecting user grammar elements in dependence upon the presentation action identifiers;
- 10 wherein storing a multiplicity of user grammar elements for the user in a voice response grammar on a voice response server includes storing the

selected user grammar elements in the voice response grammar.

6. The method of claim 1 further comprising creating a presentation document, including:

5 creating, in dependence upon an original document, a structured document comprising one or more structural elements;

classifying a structural element of the structured document according to a presentation attribute; and

10 creating a presentation grammar for the structured document, wherein the presentation grammar for the structured document includes grammar elements each of which includes an identifier for at least one structural element of the structured document.

7. The method of claim 6 wherein classifying a structural element comprises:

identifying a presentation attribute for the structural element;

5 identifying a classification identifier in dependence upon the presentation attribute; and

inserting the classification identifier in association with the structural element in the structured document.

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8. The method of claim 6 wherein creating a presentation grammar for the structured document comprises:

identifying the content type of the original document;

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selecting, in dependence upon the content type, a full presentation grammar from among a multiplicity of full presentation grammars; and

10 filtering the full presentation grammar into a presentation grammar for the structured document in dependence upon the structural elements of the structured document.

9. A system for creating a voice response grammar in a voice response server, the system comprising:
- 5 means for identifying a user for a presentation, the user having a user grammar, the user grammar including one or more user grammar elements, each user grammar element including an identifier of a structural element, a key phrase for invoking a presentation action, and a presentation action identifier representing a presentation action; and
- 10 means for storing a multiplicity of user grammar elements for the user in a voice response grammar on a voice response server.
10. The system of claim 9 wherein means for identifying a user for a presentation comprises:
- 5 means for creating a data structure representing a presentation; and
- means for listing in the data structure at least one user identification.
11. The system of claim 9 wherein the user grammar comprises a multiplicity of user grammar elements for a content type, the system further comprising:
- 5 means for identifying presentation documents for the presentation, each presentation document having a content type; and
- means for selecting user grammar elements according to the content type of the identified presentation documents;
- 10 wherein means for storing a multiplicity of user grammar elements for the user in a voice response grammar on a voice response server includes means for storing the selected user grammar elements in the voice response

grammar.

12. The system of claim 9 wherein the user grammar comprises a multiplicity of user grammar elements, the system further comprising:

5 means for identifying presentation documents for the presentation, the presentation documents including structured documents having structural element identifiers; and

means for selecting user grammar elements in dependence upon the structural element identifiers;

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wherein means for storing a multiplicity of user grammar elements for the user in a voice response grammar on a voice response server includes means for storing the selected user grammar elements in the voice response grammar.

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13. The system of claim 9 wherein the user grammar comprises a multiplicity of user grammar elements, the system further comprising:

5 means for identifying presentation documents for the presentation, each presentation document having a presentation grammar including presentation action identifiers; and

means for selecting user grammar elements in dependence upon the presentation action identifiers;

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wherein means for storing a multiplicity of user grammar elements for the user in a voice response grammar on a voice response server includes means for storing the selected user grammar elements in the voice response grammar.

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14. The system of claim 9 further comprising creating a presentation document, including:

5 means for creating, in dependence upon an original document, a structured document comprising one or more structural elements;

means for classifying a structural element of the structured document according to a presentation attribute; and

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means for creating a presentation grammar for the structured document, wherein the presentation grammar for the structured document includes grammar elements each of which includes an identifier for at least one structural element of the structured document.

15. The system of claim 14 wherein means for classifying a structural element comprises:

5 means for identifying a presentation attribute for the structural element;

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means for identifying a classification identifier in dependence upon the presentation attribute; and

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means for inserting the classification identifier in association with the structural element in the structured document.

16. The system of claim 14 wherein means for creating a presentation grammar for the structured document comprises:

5 means for identifying the content type of the original document;

means for selecting, in dependence upon the content type, a full presentation grammar from among a multiplicity of full presentation grammars; and

10 means for filtering the full presentation grammar into a presentation grammar for the structured document in dependence upon the structural elements of the structured document.

17. A computer program product for creating a voice response grammar in a voice response server, the computer program product comprising:
- a recording medium;
- 5 means, recorded on the recording medium, for identifying a user for a presentation, the user having a user grammar, the user grammar including one or more user grammar elements, each user grammar element including an identifier of a structural element, a key phrase for invoking a presentation
- 10 action, and a presentation action identifier representing a presentation action; and
- means, recorded on the recording medium, for storing a multiplicity of user grammar elements for the user in a voice response grammar on a voice
- 15 response server.
18. The computer program product of claim 17 wherein means, recorded on the recording medium, for identifying a user for a presentation comprises:
- means, recorded on the recording medium, for creating a data structure
- 5 representing a presentation; and
- means, recorded on the recording medium, for listing in the data structure at least one user identification.
19. The computer program product of claim 17 wherein the user grammar comprises a multiplicity of user grammar elements for a content type, the computer program product further comprising:
- 5 means, recorded on the recording medium, for identifying presentation documents for the presentation, each presentation document having a content

type; and

10 means, recorded on the recording medium, for selecting user grammar elements according to the content type of the identified presentation documents;

15 wherein means, recorded on the recording medium, for storing a multiplicity of user grammar elements for the user in a voice response grammar on a voice response server includes means, recorded on the recording medium, for storing the selected user grammar elements in the voice response grammar.

20. The computer program product of claim 17 wherein the user grammar comprises a multiplicity of user grammar elements, the computer program product further comprising:

5 means, recorded on the recording medium, for identifying presentation documents for the presentation, the presentation documents including structured documents having structural element identifiers; and

10 means, recorded on the recording medium, for selecting user grammar elements in dependence upon the structural element identifiers;

15 wherein means, recorded on the recording medium, for storing a multiplicity of user grammar elements for the user in a voice response grammar on a voice response server includes means, recorded on the recording medium, for storing the selected user grammar elements in the voice response grammar.

21. The computer program product of claim 17 wherein the user grammar comprises a multiplicity of user grammar elements, the computer program product further comprising:

- 5 means, recorded on the recording medium, for identifying presentation documents for the presentation, each presentation document having a presentation grammar including presentation action identifiers; and
- 10 means, recorded on the recording medium, for selecting user grammar elements in dependence upon the presentation action identifiers;
- 15 wherein means, recorded on the recording medium, for storing a multiplicity of user grammar elements for the user in a voice response grammar on a voice response server includes means, recorded on the recording medium, for storing the selected user grammar elements in the voice response grammar.
22. The computer program product of claim 17 further comprising creating a presentation document, including:
- 5 means, recorded on the recording medium, for creating, in dependence upon an original document, a structured document comprising one or more structural elements;
- 10 means, recorded on the recording medium, for classifying a structural element of the structured document according to a presentation attribute; and
- 15 means, recorded on the recording medium, for creating a presentation grammar for the structured document, wherein the presentation grammar for the structured document includes grammar elements each of which includes an identifier for at least one structural element of the structured document.
23. The computer program product of claim 22 wherein means, recorded on the recording medium, for classifying a structural element comprises:
- means, recorded on the recording medium, for identifying a presentation

- 5 attribute for the structural element;
- means, recorded on the recording medium, for identifying a classification identifier in dependence upon the presentation attribute; and
- 10 means, recorded on the recording medium, for inserting the classification identifier in association with the structural element in the structured document.
24. The computer program product of claim 22 wherein means, recorded on the recording medium, for creating a presentation grammar for the structured document comprises:
- 5 means, recorded on the recording medium, for identifying the content type of the original document;
- means, recorded on the recording medium, for selecting, in dependence upon the content type, a full presentation grammar from among a multiplicity of
- 10 full presentation grammars; and
- means, recorded on the recording medium, for filtering the full presentation grammar into a presentation grammar for the structured document in dependence upon the structural elements of the structured document.